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REMARKS

Claims 30, 44, 46 and 57 are objected to due to the use of the term "in particular". Claim 49 is objected to for a typographical error in line 2. The dependency of claim 55 appears to be incorrect since proper antecedent basis is not currently established. Claim 57 lacks a period. In response to these objections, appropriate correction has been taken in all subject claims. Review and acceptance is accepted.

Claims 30 through 35, 39 through 41 and 43 through 58 stand rejected under 35 USC 103(a) as being unpatentable over Span '506. The Examiner has however indicated that claims 36 through 38 and 42 are objected to as being dependent upon a rejected base claim but would be allowable if re-written in independent form including all of the limitations of the base claim and any intervening claims.

In response to this Office Action, the applicant has amended claim 30 to incorporate the limitations of claim 31 and to specify that the material in the other region of the leaf has a lower atomic number. Claim 31 has accordingly been cancelled. Corresponding amendment has been taken to the other independent claims 44, 46 and 57. The dependent claims have been appropriately amended for consistency with the respective independent claim.

In paragraph 22, page 6 of the Office Action, the Examiner rejects claims 31, 56 and 58 quoting column 6, lines 49 through 54 and column 7, lines 34 through 38 of Span. The applicant respectfully disagrees with this rejection for the following reasons.

Span discloses a radiation device having a multi-leaf collimator with a plurality of leaves (multi-leaf collimator assembly 17 and collimator

leaves 18). Additional collimating devices are provided (diaphragm leaves 30, 31, 35, 36). The additional collimating means are designed to absorb radiation which leaks through the leaves of the multi-leaf collimator and which would otherwise lead to an undesirable penumbra (see for example column 6, paragraph 2 of Span). Span thereby specifies that the inner portion 32 of the collimating device is made from tungsten and that the adjacent portion is made from lead, framed in an appropriate steel structure. Therefore, the adjacent portion consists essentially of lead, since the shielding effect of the steel frame is negligible. This adjacent portion of lead is intended to absorb leakage radiation which has passed between collimator blades in the region between the beams 52 and 53. In the event that the lead were insufficient to absorb that radiation, the rear portion of the collimating device 31 would suffer penetration of leakage radiation which would then be incident on the patient. It is the intended purpose of the Span reference to prevent this from happening. For this reason, the collimator leaves, in all regions, are either made from tungsten or from lead. The lead is encased in a steel frame for reasons of mechanical stability, since lead is extremely soft. Therefore, in contrast to the recitation of the amended independent claims, the absorbing material of Span is present not only in the region which has entered into the path but throughout the entire collimator assembly.

In accordance with the invention as amended, the adjacent region external to the beam is fashioned from a material having a lower atomic number than the material in the absorbing region. Span clearly teaches away from this limitation since the lead used by Span in the secondary region has a higher atomic number than tungsten. Span therefore provides no motivation for these limitations.

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The applicant believes the application as amended to be sufficiently distinguished from the prior art of reference to warrant patenting in the United States and respectfully requests passage to issuance.

No new matter has been added in this amendment.

Respectfully submitted,

Paul Vincent

Dr. Paul Vincent

Registration number 37,461

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Date

Kohler Schmid Moebus

Patentanwälte

Ruppmannstrasse 27

D-70565 Stuttgart

Germany

Telephone: 49-711-78 47 30

Fax : 49-711-78 00 996